



**State of New Jersey**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION**  
**DIVISION OF HAZARDOUS WASTE MANAGEMENT**

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NO. P 905-518-339

26 APR 1991

Cris Anderson, Manager  
Environmental Manager  
L.E. Carpenter Company  
1301 E. Ninth St. Suite 3600  
Cleveland, OH 44114

Dear Mr. Anderson:

Re: L.E. Carpenter ACO, dated September 16, 1986  
Draft Feasibility Study Report (FS), dated April 1, 1991

The New Jersey Department of Environmental Protection (Department) and the United States Environmental Protection Agency, Region II (EPA) have reviewed the draft document cited above and have the following preliminary comments (all reviewers have not yet responded) that must be addressed before the FS can be approved.

**COMMENTS**

<u>Item</u>	<u>Page</u>	<u>Comments</u>
1.	1-6	The Department feels that the possible variations in groundwater flow direction must be recognized to complete the hydrogeological characterization of the site. The direction of groundwater flow could change given the large range in water table fluctuations, the low flows in a very permeable media and the very low gradient. The FS should reflect this possibility.
2.		The Department cannot agree with the conclusion that the low levels of VOC's e.g. chlorinated hydrocarbons, are not related to the LE Carpenter site since such compounds were found in two monitoring wells #2 and #4 during sampling that lead to the signing of the original administrative order in 1981. The Department suspects that the VOC's found in MW 131 may have migrated from the site to the adjacent property in the 1970's. Therefore, the area east of the drainage ditch should <u>not</u> be eliminated at this time.

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3. 1-12 It isn't clear whether any research was done to determine whether the metals lead and antimony are associated with the mining operations that were conducted early at the site. For example, are these metals constituents of the magnetite ore? If no effort was made to establish a connection between the on-site mining activities and the presence of lead and antimony, the last sentence on this page is misleading. Briefly explain extent of research which allows drawing this conclusion.
4. 2-9 Regardless of the exact origin of the floating immiscible product (which may never be fully known), the semi-quantitative analysis results on page 1-10 indicate that the composition of this material is similar to that of a mixture of RCRA wastes with the codes F003, U028 and U239, e.g., a mixture of the spent solvents xylene and ethylbenzene, together with the spilled or discarded chemical products diethylhexyl phthalate and xylene. Therefore, EPA considers the RCRA regulations which apply to the management of these listed RCRA wastes to be ARARs for the any future management of the immiscible product and the soil and groundwater contaminated by the immiscible product. These must be clearly noted in Section 2.
5. 2-13 In view of the above comment regarding page 2-9, EPA considers the treatment standards for xylene and ethylbenzene in 40 CFR Section 268.41 to be ARARs for any future land disposal of wastes contaminated by the immiscible product. These standards, which must be included in Table 2-5, are:

Constituent Concentrations in Waste Extract (in mg/l)

	<u>Wastewaters</u>	<u>Other Waste</u>
Ethylbenzene	0.5	0.53
Xylene	0.05	0.15

6. 2-13 DEHP is the organic contaminant which contributes the most to the calculated risk. Therefore, the selection of appropriate cleanup standards for DEHP is especially important. In addition to the two potential soil cleanup standards for DEHP in Table 2-5, the action level for Total Base/Neutral Extractables in Table 2-4 has the potential to address DEHP in soil.

The 170 mg/kg BEERA industrial-use action level is inappropriate for this site. Firstly, it is not clear that the site will always be limited to industrial use. In addition, this action level corresponds to a risk for workers which is near the high end of the  $10^{-4}$  to  $10^{-6}$  risk range. Section 300.430(e)(2)(i)(A)(3) of the National Contingency Plan states that the  $10^{-6}$  risk level shall be used as the "point of departure" for determining remediation goals when ARARs are not available or are not adequately protective. (There are no health based ARARs for DEHP in soil). The preamble discussion on page 8718

of the March 8, 1990 Federal Register indicates that the use of  $10^{-6}$  as the point of departure expresses EPA's preference for remedial actions that result in risks at the more protective end of the  $10^{-4}$  to  $10^{-6}$  risk range. It is EPA's position that cleanup standards corresponding to risks at the less protective end of the acceptable risk range should not be utilized unless they are warranted by the criteria for remedy selection. The more protective risk level should be used for this site.

7. 2-13 In view of the above comment regarding page 2-9, EPA considers the 28 mg/kg treatment standards for DEHP and xylene to be ARARs for soils which receive treatment to be followed by land disposal. Since these standards are based on treatment technology, rather than on health or environmental effects, they are not ARARs for any soils that will be left in place, untreated or treated in situ.
8. 3-2 While it is possible to define the soil needing remediation as the soil located at one or more specific areas, an alternative approach is to specify soil action areas, an alternative approach is to specify soil action levels and to require remediation of the soil exceeding those action levels. In order to use the former approach one must have good data to define the area needing remediation and one must also ensure that the soils outside of the area to be remediated do not exceed appropriate action levels. This approach requires much more extensive evaluation at the FS and ROD stages than the alternative approach, which defers some of the decisions about the areas to be remediate until the design and/or construction stages.
9. 3-2 The June 1990 RI Report indicates several areas of soil contamination exceeding NJDEP action levels which are outside of the East Site Soils Operable Unit as shown in Figure 5-1. For example, Figure 26 of the RI Report shows that the shallow soil samples collected at locations HA-3, HA-4, HA-6, HA-7, HA-8 and HA-19 exceeded 10 mg/kg of Total Base/Neutral Extractables. Yet none of these locations are within the East Site Soils Operable Unit. Why these locations are not included must be explained.

In the first and second paragraph, it isn't clear what "health based action level" for DEHP is being discussed. Is it the 170 mg/kg BEERA industrial-use action level? Other action levels, e.g., the 10 mg/kg action level for Total Base/Neutral Extractables, should change the scope of the remedy. No rationale has been presented for the selection of the action level used to define the East Site Soils Operable Unit. These parts must be clarified.
10. 4-29 The discussion of institutional controls to provide protection from contaminated groundwater seems to focus on institutional controls for the use of any existing wells which may become contaminated. Institutional controls to regulate the installation and/or use of future wells is another option which must be discussed.

11. 5-4

The listed disadvantages of incineration do not justify eliminating this technology from further development. As a technology which could destroy the organic contaminants, incineration has been proven highly effective. In contrast to incineration, in-situ bioremediation was reported ineffective in treating soils in the unsaturated zone (see page 4-22), while treatability tests will be needed to determine the effectiveness of soil washing. Yet both in-situ bioremediation and soil washing are further developed into detailed alternatives. The expectation of local opposition to incineration is speculative. Unless incineration is developed as an alternative, the public will not be able to reach an informed opinion on its merits for application at the site. The assertion that soil washing is more cost effective than incineration has not been demonstrated. It has not been established that soil washing can attain ARARs and hazardous byproduct streams from soil washing may be costly to manage. In comparison, the byproduct wastes from incineration should be essentially non-hazardous. Although excavation of soil for incineration may be difficult for the reasons given in the report, the difficulties involved in excavating soils to a depth of one foot below the lowest observed water table did not rule out Alternative 5 (on-site soil washing). For the above reasons, a remedial alternative employing incineration to treat contaminated soils must be developed as a detailed alternative and added to the text.

12. 6-40

As a consequence of the above comment regarding page 2-9, the treated soil must be managed as a hazardous waste unless treatment attains levels equivalent to those needed to delist wastes with the codes F003, U028 and U239. If such levels are not attained, this alternative would fail to meet the RCRA standards for design and operation of hazardous waste landfills, which would be ARARs for this alternative.

These are the comments currently available; others will be transmitted as they are received from other reviewers. It is believed that such a procedure will allow LE Carpenter more time to prepare the requested modifications. Please respond concerning these comments within ten (10) days of receipt of this letter

Should you have any questions, you may contact me at (609) 633-1455.

Sincerely,



Edgar G. Kaup, P.E., Case Manager  
Bureau of Federal Case Management

kj

- c: G. Blyskun, BGWPA  
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